service providers are guaranteed."[38] To preserve competition, the FCC has sought comments on whether to forbid existing cellular carriers to own PCN licenses in overlapping service areas.[39]

According to the current chairman of the FCC, PCNs have "considerable promise."[40] Cable companies, for example, are already bidding aggressively to provide the landline linkages that will be needed to knit PCN services together into local and ultimately wider-area networks. In February 1991, the FCC approved applications by three major cable companies to build PCN networks in San Diego, New York, Boston, Chicago, Cleveland, Stockton, and Jacksonville, Florida.[41] "The cable systems are ideally constructed to be the vehicle for tying together P.C.N. microcells," declares a vice president at Cox Enterprises, the owner of newspapers, television stations, and twenty-four cable systems. He adds: "I think P.C.N. has the potential to be a full-blown competitor to the local loop."[42]

In 1991, the FCC opened up yet another competitive door, when it authorized a radio dispatch company to use its spectrum to operate mobile telephone services in six cities and made clear that it would approve similar applications for other areas.[43] Fleet Call plans to build systems in New York, San Francisco, Los Angeles, Chicago, Houston,

---

[38]DEAN WITTER, TELECOMMUNICATIONS INDUSTRY: THE ERODING MONOPOLY 5 (Mar. 20, 1991).

[39]5 FCC RCD at 3999.

[40]Remarks of Alfred C. Sikes, FCC Chairman (Feb. 7, 1990) (1990 FCC LEXIS 879, at *7).

[41]Andrews, *Cable TV in Phone Challenge*, N.Y. TIMES, Feb. 28, 1991, § D, at 1, col. 6. Four other cable companies have also applied for permission to build experimental systems. *6 Others Granted; FCC Awards Experimental PCN Licenses to Cable MSO's for First Time*. COMMUNICATIONS DAILY, Feb. 27, 1991, at 3. One of the four, Comcast Corp., already operates both cellular and cable systems in several of the markets for which it is seeking PCN licenses. Comcast "plans to use existing cable architecture * * * to connect PCN mircocells to cellular switches and to [the] public switched network." COMMUNICATIONS DAILY, Jan. 11, 1991, at 4. Through Cable Television Laboratories, 65 cable television companies have also formed an information-sharing alliance with P.C.N. America. Andrews, *Cable TV in Phone Challenge*, N.Y. TIMES, Feb. 28, 1991, § D, at 1, col. 6.

In March 1991, PerTel was granted an experimental license to introduce "personal communications service" ("PCS") in the Pittsburgh, Cleveland, and Philadelphia areas using spread spectrum technology, which heretofore has been used almost exclusively in military communications. PerTel is collaborating with Westinghouse, which currently operates its own, sophisticated microwave system for the transmission of voice and data in Pittsburgh. PerTel's chairman points to fiber optic links in cable television as a promising medium for interconnecting cells in urban areas. *PerTel Gets FCC Approval on Next Generation Cellular Phone*, PR NEWSWIRE, Mar. 4, 1991.

[42]Andrews, *Cable TV in Phone Challenge*, N.Y. TIMES, Feb. 28, 1991, § D, at 1, col. 6.

[43]Andrews, *FCC Acts on Cellular Competition*, N.Y. TIMES, Feb. 14, 1991, § D, at 1, col. 3; *In re* Fleet Call, Inc., 68 Rad. Reg. 2d (P & F) 1301 (Mar. 14, 1991).

and Dallas. The Los Angeles system is expected to begin operating in early 1993.[44] Other companies have followed Fleet Call's lead. Mobile Communications Network, a coalition of SMR operators, plans to offer wide-area dispatch, interconnect services, and roaming over large areas in Florida by mid-1991, and it expects to provide competitive service throughout the entire state of Florida by 1992.[45] Similarly, Millicom has purchased several SMR licenses in Florida, Phoenix, and Atlanta and "plans to develop a future radiotelephone network" that will "challenge established cellular service." J. Shelby Bryan, chairman and CEO of Millicom, billed the SMR-based network as a "lower priced alternative to cellular."[46]

In sum, competition is robust in mobile telecommunications and certain to remain so. Prices are dropping. Subscribership is soaring. Innovation proceeds at a breakneck pace. The RHCs' affiliates are scattered across the country, competing with McCaw, GTE, and dozens of other providers. The structure of the mobile industry bears no resemblance at all to that of the landline network. With the FCC fully committed to a competitive market structure, with the landline network established as a common hub to ensure universal connectivity, and with the right of equal interconnection with that hub well-established, there is no possibility that mobile providers will follow the path of landline providers eighty years ago and collapse into a complacent monopoly. RHC affiliates are nowhere close to dominating today's mobile services. There is no indication whatsoever that they are likely to dominate tomorrow's.

Communities of Interest

Outside of the United States, the RHCs have become major players in developing national and transnational mobile systems. Pacific Telesis has a 26 percent stake in Mannesman Mobilfunk, an international consortium that is spending $1-2 billion to develop a second, national, digital, cellular system in Germany.[47] Most of the other six RHCs were involved in consortia bidding on the German cellular license.[48] US West is building

---

[44] *Ibid.*

[45] *Mobile Comnet to Institute Wide Area Network Across Florida*, INDUSTRIAL COMMUNICATIONS, Mar. 1, 1991 at 1; COMMUNICATIONS DAILY, Mar. 6, 1991, at 9.

[46] *Millicom Confirms Reports It Plans Radio Network to Challenge Cellular*, INDUSTRIAL COMMUNICATIONS, Mar. 23, 1990, at 3.

[47] *"Balanced Venture"; PacTel Consortium Wins W. German Cellular Contract*, COMMUNICATIONS DAILY, Dec 8, 1989, at 2; COMMUNICATIONS DAILY, May 14, 1990, at 5. PacTel is also developing a paging network in Thailand. Burgess & Quitmpo, *Reaching Out to Uncharted Territories*, WASHINGTON POST, Nov. 15, 1990, at E1.

[48] COMMUNICATIONS DAILY, Dec. 4, 1989, at 6.

cellular networks in the U.K., the Soviet Union, Hungary, and Czechoslovakia.[49] BellSouth has a 40 percent stake in a British cellular and paging company, owns paging operations in Australia, and belongs to a consortium chosen to develop a cellular system in Southern France. It is also involved in cellular ventures in South America and New Zealand,[50] and recently won shares of Mexico's new cellular licenses in the western region of the country, including Guadalajara.[51] Bell Atlantic has joined with US West and Czechoslovakia's Ministry of Posts & Telecommunications to build a cellular system for that country.[52] It is also working with Belle Mead in Moscow and has submitted bids to develop systems in Norway and Italy.[53] Bell Atlantic and Ameritech recently purchased New Zealand Telecom and its cellular subsidiary which provides nationwide service.[54]

These foreign ventures by RHCs and many other concerns reflect a sharp difference between regulatory and antitrust policies in the United States and abroad. To our knowledge, no other country attempts to tie mobile services to narrow, fixed, stationary "communities of interest." Foreign countries have uniformly directed development toward regional or national systems. Canada, for example, has reserved one cellular license for a national operator (Cantel); the other is dedicated to regional carriers.[55] As of early 1990, Cantel served 200,000 subscribers across Canada,[56] including Vancouver, Toronto, Montreal, Calgary, and Edmonton,[57] and covered nearly 2,000 miles of a 3,500 mile trans-Canada highway.[58] The United Kingdom has licensed

---

[49]Burgess & Quimpo, *Reaching Out to Uncharted Territories*, WASHINGTON POST, Nov. 15, 1990, at E1; COMMUNICATIONS DAILY, Dec. 6, 1989, at 6.

[50]Burgess & Quimpo, *Reaching Out to Uncharted Territories*, WASHINGTON POST, Nov. 15, 1990, at E1.

[51]COMMUNICATIONS DAILY, Mar. 8, 1990, at 7.

[52]COMMUNICATIONS DAILY, June 18, 1990, at 4; Burgess & Quimpo, *Reaching Out to Uncharted Territories*, WASHINGTON POST, Nov. 15, 1990, at E1.

[53]*Cellular Operator's International Roll Call*, MOBILE PHONE NEWS, Mar. 14, 1991, at 5.

[54]*OSP After Divestiture: Customers Need More Information*, TELEPHONE NEWS, Sept. 17, 1990, at 4.

[55]CTIA, STATE OF THE CELLULAR INDUSTRY 58 (Spring 1990); CTIA, *Just the Facts for Canada*, CTIA FACT SHEET (1990).

[56]Meeks & Khalaf, *This Will Be a Very Political Issue*, FORBES, Feb. 19, 1990, at 80. "Over the next three years, Cantel is planning to spend $800 million to increase capacity in major markets and to build a 4,800 mile-long cellular corridor across Canada, from the Maritime Provinces in the East to Vancouver in the West." *Ibid.*

[57]*McCaw Cellular/LIN Broadcasting to Rebuild Cellular Telephone Systems in N.Y., N.J., Pac. Northwest*, BUSINESS WIRE, Oct. 3, 1990.

[58]CTIA, STATE OF THE CELLULAR INDUSTRY (Spring 1990) (map included in book with information dated Mar. 12, 1990); RAND MCNALLY, ROAD ATLAS: UNITED STATES, CANADA, MEXICO 2-3 (1991).

two national cellular franchises.[59] Germany has licensed a second, integrated, digital nationwide system to serve a population of 60 million.[60] The Scandinavian network spans five countries including Sweden, Finland, Norway, Denmark, and Iceland, and it recently announced an agreement to add Latvia.[61] In September 1987, telco operators from thirteen European countries agreed to a standard for an all-digital Pan-European cellular network.[62] The system rollout is scheduled for 1991-92.[63] As Craig McCaw points out, the United States is "the only country in the world that does not have a national cellular license on either the wireline or the non-wireline side of the spectrum."[64]

Nonetheless, the U.S. cellular industry fully shares the goal of creating an integrated, national network. For McCaw, "[a]utomatic, effortless call delivery anywhere in North America has long been among our most important strategic objectives. * * * [We] confirm the commitment * * * not only to particular cellular markets but to the near- term creation of a seamless, high-quality personal communications network spanning the North American continent."[65] Centel speaks optimistically of "a seamless cellular network";[66] Vanguard declares that with the arrival of service in RSAs, the "'seamless' nationwide cellular network [will] become[] a reality."[67] According to the president of CTIA, "[o]ne

---

[59]*GTE Aims to Become US-Wide One-Stop Cellular Service Shop*, COMPUTERGRAM INT'L, May 9, 1989. The Racal Vodaphone system in the U.K. uses a sophisticated roaming signaling system that supports nationwide roaming. Lindquist, *The Future of Roaming and Cellular Networking*, TELEPHONY, Sept. 26, 1988, at 76.

[60]*GTE to Compete for License to Construct and Operate West German Part of Pan-European Digital Mobile*, PR NEWSWIRE, Oct. 6, 1989.

[61]*Swedish Mobile Network Adds Latvia to its Network*, MOBILE PHONE NEWS, May 23, 1991, at 6. Fully automatic roaming is a part of the network specification and has been implemented from the start, allowing subscribers to place and receive calls wherever they are. Lindquist, *The Future of Roaming and Cellular Networking*, TELEPHONY, Sept. 26, 1988, at 76.

[62]The agreement was signed by representatives of Belgium, Denmark, Finland, France, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, the United Kingdom, and West Germany. Thomas, *Europe-Wide Mobile Phone Service to Open by 1991*, FIN. TIMES, Sept. 8, 1987, at 4.

[63]*Europe Agrees on Mobile-Phone Net*, ELECTRONICS, Sept. 17, 1987, at 122.

[64]MCCAW CELLULAR COMMUNICATIONS, INC., CELLULAR COMMUNICATIONS: A VISION OF THE FUTURE 6 (Oct. 20, 1989).

[65]*McCaw Cellular/LIN Broadcasting to Rebuild Cellular Telephone Systems in N.Y., N.J., Pacific Northwest*, BUSINESS WIRE, Oct. 3, 1990.

[66]*Centel Focuses on Southwest and Mexico*, MOBILE PHONE NEWS, Sept. 13, 1990, at 1.

[67]VANGUARD CELLULAR SYS., INC., 1989 ANNUAL REPORT 1 (1990).

of our industry's most important goals is to provide ubiquitous service across America * * *."[68]

Whether the RHCs will be allowed a major role in developing integrated regional and national systems within the United States remains in question. That their competitors will do so does not. Consent decree strictures aside, the other obstacles to the establishment of regional and national mobile services in the United States are rapidly being removed. With paging services, geographic factors have all but disappeared; wide-area services are ubiquitous. Geographic bounds on mobile telephony are disappearing in just the same way. The recent completion of the FCC's cellular licensing process has set off a competitive race to provide truly seamless, wide-area service. As we have seen, providers who are free to do so are rapidly building up clusters of operation, and integrating services within them. The next step for dominant players like McCaw will be to integrate service across their many clusters and McCaw has already begun to do so. The engineering work is already well underway nationwide, and integrated systems are already in operation in some areas. The recent establishment of the IS-41 standard has set the stage for yet another layer of intersystem coordination -- the integration of service among unaffiliated providers. Roaming agreements already provide one element of such intersystem, interprovider coordination; IS-41 has now established common standards for automatic call delivery and intersystem handoff.

One might have expected that the major companies vying for a larger share of cellular revenues would have resolved to boycott and undercut each other's services, and to oppose rather than support interprovider collaboration. Nothing of the sort has happened, and the economic reasons are not hard to fathom. Market share is far less important than market growth: the key to profitability is increased usage, and the key to increased usage is providing what consumers want. All market research confirms that what consumers want is a mobile telephone that works precisely as a phone is expected to work, and works everywhere. But no single provider of cellular service, not even McCaw, can come close to offering such service on its own. Extensive collaboration with other providers is thus essential.

All major providers have recognized the necessity of building national service for "their" customers by sharing those customers with others, through joint ventures, partnerships, and seamless interconnection. McCaw, for example, declares: "[W]e will continue to form the wide ranging marketing and technical alliances that will make the network a reality."[69] To that end, the company has recently entered into a joint venture with Keystone Cellular Communications.[70] McCaw's most ambitious cooperative venture

---

[68]*RSA Milestone Reached*, CELLULAR INDUSTRY REPORT, Jan. 1991, at 11.

[69]*McCaw Completes LIN Acquisition*, UNITED PRESS INT'L, Mar. 5, 1990.

[70]McCaw and Keystone are co-general partners of Horizon Cellular Telephone Company, which develops and operates RSAs. Horizon is targeting RSAs with "strong roaming potential, with an emphasis on areas adjacent to metropolitan centers." Horizon's rural cellular systems are expected to "direct traffic into

involves an agreement with Canada's non-wireline operator (Cantel) that will allow customers to enjoy intersystem handoff and automatic call delivery anywhere in the companies' combined service areas.[71] Pursuing a similar strategy, Century Telephone has entered an agreement with five other Louisiana companies to provide cellular service across the state.[72]

If the competitive network is to become a reality, RHC affiliates are going to have to be given similar freedom to interconnect within their own systems, and with the systems of others. RHC affiliates do not by any means dominate the cellular business, but they do play an important role. In a few major areas, two RHC affiliates compete head to head. MAP 4.1. Because the RHCs, to varying degrees, operate numerous systems across the U.S., no cellular service can be truly seamless or nationwide without their full participation. Craig McCaw recently recognized these realities in a major speech. "Cellular is growing so fast, and requires so much capital, that one entity cannot be all things to all people. As individual companies, we can consolidate to move forward at the regional level. At the national level, we must cooperate to create this seamless national network."[73] McCaw went on to emphasize the importance of full participation by wireline providers, including RHC affiliates, in the process of knitting together national service. To that end, McCaw looks forward to "increasingly active, aggressive participation in cellular by the Regional Bell Operating Companies (RBOCs)."[74] "I want to emphasize that the independent team building the alternative network itself will include some of the more creative and open-minded regional Bell companies * * *."[75]

McCaw's metropolitan cellular properties." According to one report, "[t]he joint venture has targeted RSAs located in Pennsylvania, Maryland, West Virginia, and Vermont, with the nonwireline RSA market Maryland #1 being the first in the series." *McCaw & Keystone Form Joint Venture*, MOBILE PHONE NEWS, Dec. 20, 1990, at 7; Armstrong, *Cellular Technology Moving into Rural Pennsylvania*, PHILADELPHIA BUS. J., Nov. 26, 1990, § 2, at 3B.

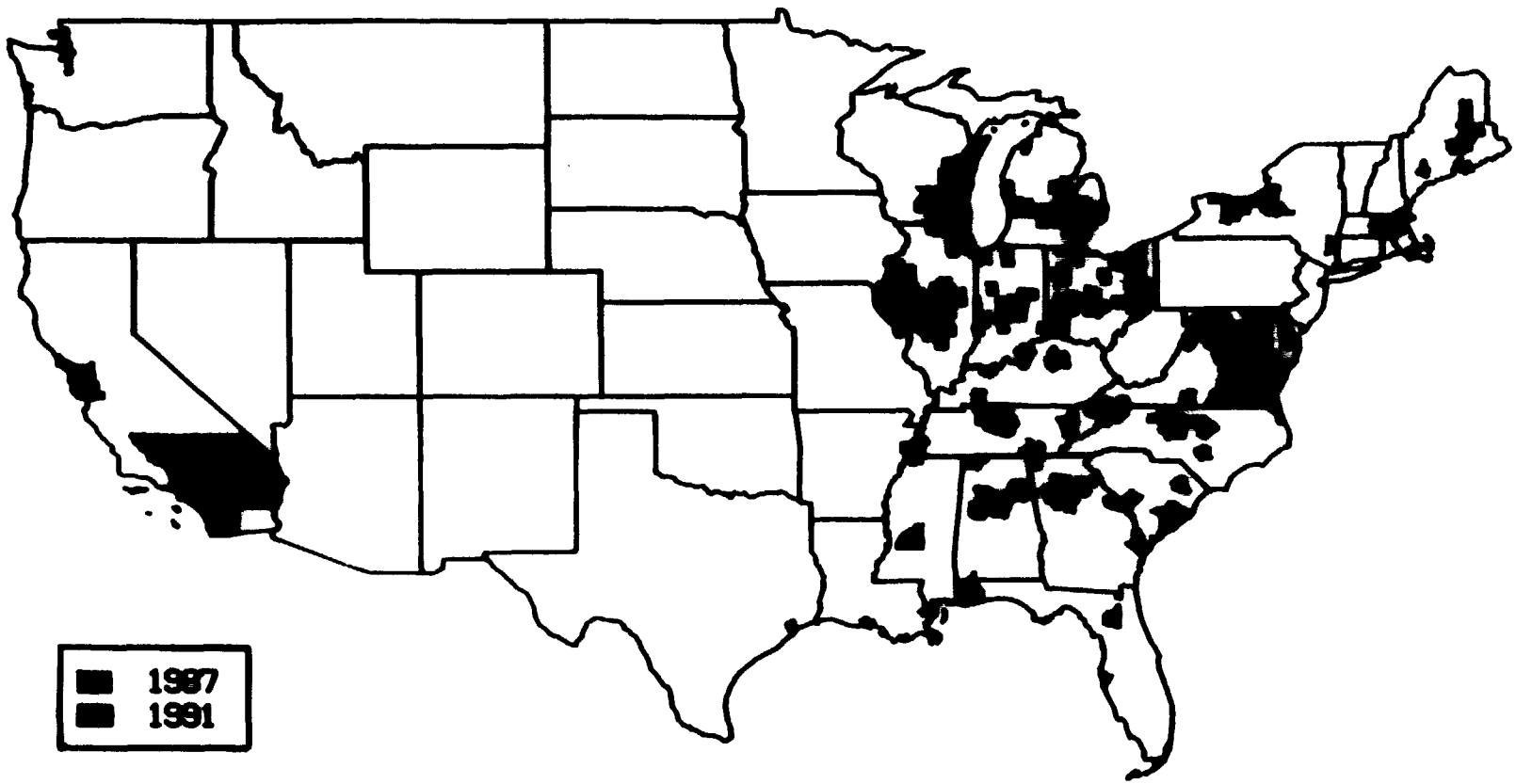
[71] *McCaw Cellular/LIN Broadcasting to Rebuild Cellular Telephone Systems in N.Y., N.J., Pacific Northwest*, BUSINESS WIRE, Oct. 3, 1990.

[72] "These agreements are in keeping with our strategy of clustering MSA and RSA properties along major traffic corridors for maximum operating efficiency and future profitability." *Century Telephone Enterprises Inc.*, FIN. WORLD, Nov. 28, 1989, at 106.

[73] MCCAW CELLULAR COMMUNICATIONS, INC., CELLULAR COMMUNICATIONS: A VISION OF THE FUTURE 7 (Oct 20, 1989).

[74] *Id.* at 8.

[75] *Id.* at 10.



Map 4 1 Growth of Cellular Competition Between RHCs.

Ancillary Services

While both mobile providers and their customers welcome the prospect of seamless, national, mobile networks, the reactions of others have varied. Providers of information services have generally had little to say about this trend. For the most part, these providers already operate in a highly competitive environment. And when GTE or McCaw chooses to provide a dedicated information service to cellular customers, those customers still enjoy full access to all other on-line information services through the landline network.

The coalescence of a national mobile network has quite different implications, however, for established long distance carriers. Despite frequent expressions of dismay, established long distance carriers have settled into generally comfortable and profitable coexistence with landline local exchange carriers and do not welcome the prospect of change. Indeed, some of the most determined opposition to full RHC participation in mobile markets has come from companies that insist -- indeed, positively *demand* -- that mobile traffic must be routed *back through* the bottleneck landline exchanges, rather than directly between the competitive mobile exchanges. *See* FIGURE 3.1(A)-(B), *supra*. The bottleneck, often said to be the bane of the long distance carrier's business, has turned out to be that carrier's cherished friend and ally.

Why should this be? Long distance carriers who connect to their customers through the landline exchanges can charge retail rates. Analysts agree that in the retail market, long distance operators are settling into a "relatively benign and stable oligopoly," with AT&T setting umbrella prices that are closely followed by others.[76] Competitive pressure is also less than it might be in the provision of long distance services to cellular customers. While providers who are not affiliated with RHCs do buy long distance connections wholesale, they are not forced by competition to pass on the discounts to their customers, at least not when they compete against an RHC affiliate.[77]

Forcing mobile traffic back through the bottleneck also generates more traffic for the established, landline, long distance carriers. A driver gets into his car in Jefferson City and begins driving to St. Louis. He places a call to St. Louis while on the road. As he approaches his destination, the distance between caller and called party steadily decreases. But the distance the call must travel steadily *increases*, at least if the call must be routed back to the driver's "home" exchange in Jefferson City. Thus, by the time he

---

[76]*See* BERNSTEIN RESEARCH, THE LONG DISTANCE INDUSTRY; STRATEGIC ANALYSIS/FINANCIAL FORECAST 7 (1990).

[77]Centel, for example, reportedly charged its customers AT&T rates to deliver wide-area traffic, but in fact used US Sprint's cheaper service. In June 1990, the North Carolina Utilities Commission ordered Centel to "cease and desist immediately from charging its customers more than it actually pays for long-distance service." The Commission also considered imposing fines or other sanctions against Centel based on the fact that Centel filed tariffs that referred to the AT&T rate. *See* Lanning, *N.C. Commission Probes Centel Cellular*, TELEPHONY, June 4, 1990, at 10.

reaches St. Louis, a long distance carrier is hauling his call on a full round-trip from St. Louis, back to Jefferson City, and then back again to St. Louis. Inefficiencies of this kind are inevitable so long as mobile traffic is rigidly forced to travel back through "home" landline exchanges.

A fully integrated -- and fully competitive -- national market would operate quite differently. Intersystem handoff would be arranged to take advantage of -- rather than to fight against -- the vehicle that is moving toward the place being called. Long distance carriers would sell more service at wholesale, and less at retail, which would reduce rates for cellular customers. In time, cellular carriers would enter into direct, facilities-based competition with long distance carriers, as some are already doing even without the spur of full competition.

Conclusion

The prospect of convergence between radio and landline markets, though often discussed, remains quite distant. Today's mobile telecommunications services provide significantly more convenience than their stationary equivalents, at a significantly higher price. A landline packet-switched network will transmit a short burst of information to a designated location for a fraction of a penny. A paging service transmits a similar amount of information to a mobile receiver, at a much higher cost. Similarly, a cellular telephone call costs between 25 and 45 cents a minute for 20 miles of mobile connection;[78] a 2,000 mile connection of similar duration on the landline network generally costs less than half as much.[79] Most of the cost of a hybrid connection between a mobile and a landline unit derives from the mobile part of the loop, no matter how short. For this additional price, mobile services of course provide a unique additional measure of convenience. But today, at least, it is still quite clear that mobile services occupy a market separate from stationary ones. This market division can be defined unambiguously: if *any* leg of the connection is radio, the entire service will be priced accordingly.[80]

---

[78]And, then, only if the phone on the other end is part of the landline network.

[79]*See, e.g.*, Simoes, *The Phone Options for People on the Go*, L.A. TIMES, May 1, 1991, § E, at 5, col. 1; Ohebsion, *Even Movies Reflect the Phenomenal Growth of Cellular Phone Industry in the Southland*, L.A. Bus. J., Mar. 18, 1991, § 1, at 35.

[80]That mobile services currently occupy a market separate from landline services has been repeatedly recognized by both DOJ and the decree court. In 1987, for example, DOJ stated that "mobile services do not compete with landline interexchange service" because of "cost, capacity, and market factors." Response of the United States to Comments on its Report and Recommendations Concerning the Line-of-Business Restrictions Imposed on the Bell Operating Companies by the Modification of Final Judgment at 58, United States v. Western Elec. Co., No. 82-0192 (D.D.C. Apr. 27, 1987). *See also* Report and Recommendations of the United States Concerning the Line of Business Restrictions Imposed on the Bell Operating Companies by the Modification of Final Judgment at 77-78, United States v. Western Elec. Co., No. 82-0192 (D.D.C. Feb. 2, 1987). The decree court has reiterated this conclusion as recently as September 1990. United States v. Western Elec. Co., 1990-2 Trade Cas. (CCH) ¶ 69,177, at 64,450 (D.D.C. 1990) ("as long as the higher price and limited capacity of cellular radio and other mobile services prevent it from becoming a substitute for landline services, it is appropriate to consider such services a separate market").

It has been suggested, however, that mobile services are converging with landline services; that as prices of handsets and service continue to fall, mobile services may begin to compete with their stationary counterparts.[81] Two things can be said today about that prediction. First, it is, at best, a prediction, and one that projects quite a distance into the future. Mobile connections today remain *considerably* more expensive than stationary ones. In today's market, the two plainly do not compete.[82] Given the vast discrepancy in both price and present levels of penetration, direct competition is nowhere near imminent. The second point is the more important one. If and when radio services do come to compete directly with landline services, whatever local exchange bottleneck still exists today will have disappeared. When the bottleneck disappears, so too will regulatory and antitrust restrictions of every kind, on both the RHCs and their affiliates.

It has also been suggested that even in today's market conditions, the RHCs could "evade the basic interexchange services restriction itself by the simple expedient of constructing a connection between [their] mobile telecommunications switching offices and any of their standard end offices, thus providing long distance service throughout the country through a combination of cellular and standard interexchange facilities."[83] This

---

The FCC and at least one state regulatory agency have reached similar conclusions. For example, in 1986, the Commission agreed with the decree court's conclusion that "cellular service is far from being an actual competitor of conventional local service at present, and * * * it is unlikely that the technology and the economics will be such that it can be such a competitor in the foreseeable future. The market for cellular service, while highly competitive for those subscribers who need and can afford its specialized capabilities, is not a serious competitor for the conventional wireline service because of its costs and its limited capacity for traffic volume." 60 Rad. Reg. 2d (P & F) 583, 586 (quoting United States v. Western Elec. Co., 1986-1 Trade Cas. (CCH) ¶ 66,867, at 62,857 (D.D.C. 1986)). The California Public Utilities Commission echoed the FCC in 1990, finding that "cellular service will not replace or directly compete with conventional wireline service in the near future." Investigation on the Commission's Own Motion into the Regulation of Cellular Radiotelephone Utilities, 36 C.P.U.C.2d 464, 472 (1990).

[81]The decree court recently stated: "While it remains appropriate to consider mobile cellular phone services as a separate market from landline phone services * * * there is a possibility * * * that with changes in the technology and price of cellular services, this market will come to compete with landline services." 1990-2 Trade Cas. (CCH) at 64,455-64,456.

[82]Thus, when MCI decided to sell all its mobile operations, a company spokesman explained that such operations didn't "fit into our strategy, which is to provide national and international long-distance services." Tucker, *MCI Stumps Agreed Sale of Cellular Unit*, WASHINGTON POST, July 28, 1988, at B1. MCI apparently recognized at that time that cellular offered no immediate prospect of direct competition with landline service, and thus would not imminently have any role to play in long distance markets.

[83]United States v. Western Elec. Co., 673 F. Supp. 525, 551 (D.D.C. 1987). This has been a persistent theme since divestiture was first discussed. In a 1982 comment, DOJ argued that permitting the RHCs to operate interLATA mobile services "would leave the decree's prohibition on BOC provision of interexchange services without any meaning." Response of the United States to Comments Received on the BOC LATA Proposals at 61 n.*, United States v. Western Elec. Co., No. 82-0192 (D.D.C. Nov. 23, 1982). And in its September 1990 decision, the court summarized "the vision feared by many -- namely, Regional Company provision of long distance service throughout the country through the connection of any of their mobile telecommunications switching offices with any of their standard end offices."

statement reflects a basic error of economics. A hybrid service that combines radio and landline elements can compete directly with an all-landline service only if the radio element is itself a direct, competitive substitute for the landline leg it replaces. A manufacturer cannot compete with other suppliers of ordinary steel chains, if it alone is forced to use several solid-gold links in its product. Competition for regular long distance customers through "a combination of cellular and standard interexchange facilities" will be possible only when cellular service itself competes directly with landline local access. But when such competition materializes, the local exchange bottleneck will be certifiably dead.

A much more immediate prospect -- indeed, one that is already competitively important today -- is the coalescence of formerly separate geographic markets for mobile services. When paging services were limited to public address systems, there could be only one service operating in any one place. Today there can be hundreds, precisely because radio has erased geographic boundaries on where service can be provided. Similar effects are occurring in mobile telephony. The old mobile telephones worked within simple and rigid geographic bounds; the result was limited service and equally limited competition. Cellular systems are not bounded by similar constraints: cells can be multiplied and relocated, and systems can be expanded at their edges almost at will. This makes for much more efficient use of spectrum -- which in turn makes room for more competition. The microcells used with PCNs will take service -- and competition -- a step further, again by redefining the geographic building blocks and then knitting them together into a flexible, geographically unbounded new form of service.

The disappearance of geographic boundaries has of course been perfectly complemented by the rapid development of the fully portable pager or telephone. The wristwatch pager is already at hand. Cellular phones shrink month by month. The units are becoming fully portable; the network is being integrated to make such units worth owning. As Craig McCaw states, we are "moving measurably closer to the time when all cellular calls will associate telephone numbers with people, not with places."[84]

As regional and then national services coalesce, as call delivery capabilities are deployed, and as receiving units become as portable as a watch or wallet, the very notion of a subscriber's "home service area" will lose meaning. The whole point of mobile telephony is to supply a home, or at least the telephone part of a home, away from home. The wire tethering the landline phone is supposed to be severed, not just stretched. This has already occurred with regional and national paging services: users of the service subscribe anywhere and are paged anywhere; home is just where the bill is sent. A customer who uses a wristwatch pager or pocket phone in many places will have a great number of providers of service among which to choose. The more a customer moves -- and thus the more he *needs* mobile service -- the more options he will have.

---

[84] *McCaw Cellular/LIN Broadcasting to Rebuild Cellular Telephone Systems in N.Y., N.J., Pac. Northwest*, BUSINESS WIRE, Oct. 3, 1990.

These trends are uniformly favorable to competition. Limited competition within circumscribed metropolitan boundaries is giving way to regional and national service. The network that allows the phone to move at will, will also be a network that allows the consumer to subscribe for service from any provider, nearby or distant. With a truly mobile, integrated network, there will be no such thing as "home." Home will be where the shirtpocket telephone is, next to the heart.